

CLAIMS

We claim:

1. A method for restricting access to network accessible digital information by network users of at least one subscriber network, said method comprising the steps of:
 - (a) monitoring at each subscriber network all requests by the network users for digital information;
 - (b) determining whether a location indicator associated with each request is included in a database of restricted location indicators maintained at each subscriber network and denying the request where the location indicator is in the database;
 - (c) retrieving the digital information stored at the location indicator and initially analyzing the content of the information for a predetermined maximum time in the event that the location indicator is not in the database and denying or fulfilling the request based on the initial analysis;
 - (d) periodically forwarding the location indicators not in the database from the subscriber networks to a remote network node;
 - (e) retrieving the digital information stored at the forwarded location indicators at the remote network node and further analyzing the content of the information; and
periodically forwarding the location indicators found to have restricted content from the remote network node to the subscriber networks for inclusion in the database of restricted location indicators.
2. The method of claim 1 wherein the digital information includes content accessible via the Internet.

3. The method of claim I wherein the subscriber networks are local area networks wherein client computers communicate via the Ethernet access protocol.
4. The method of claim 3 wherein the searching of the database and the initial content analysis occur at an Ethernet bridge installed at the subscriber network.
5. The method of claim I wherein the location indicator is a Uniform Resource Locator.
6. The method of claim 4 wherein the location indicator is extracted from an Ethernet frame originating from a client computer of a network user.
7. The method of claim 1 wherein the database is stored in encrypted form and is searched for an encrypted location indicator.
8. The method of claim I including the step of determining whether the location indicator is in an exception list before determining whether it is in the database and fulfilling the request in the event that the location indicator is in the exception list.
9. The method of claim 1 wherein the request is fulfilled in the event that the location indicator is in the database but is a permitted category of restricted content.

10. The method of claim 1 wherein the location indicators are forwarded from the subscriber networks to the remote network node on at least an hourly basis and the location indicators are forwarded from the remote network node to the subscriber networks on at least an hourly basis.

11. A system for restricting access to a network accessible digital information by network users of at least one subscriber network, said system comprising:

(a) a database of restricted location indicators stored at each subscriber network;

(b) monitoring means at each subscriber network for monitoring all requests by the network users of the subscriber network for digital information;

(c) said monitoring means also determining whether a location indicator associated with each request is in the database;

(d) analysis means at each subscriber network for initially analyzing the content of the information stored at each location indicator not in the database and for denying or fulfilling the request based on the initial analysis;

(e) forwarding means at each subscriber network for periodically forwarding the location indicators not in the database to a remote network node;

(f) retrieval and analysis means at the remote network node for retrieving the digital information stored at each of the location indicators forwarded by the subscriber networks and further analyzing the content of the information; and

(g) dispatching means at the remote network node for periodically dispatching the location indicators found to have restricted content by the analysis means to the subscriber networks for inclusion in each database.

12. The system of claim 11 wherein the digital information includes content accessible via the Internet.
13. The system of claim 11 wherein the subscriber networks are local area networks communicating via the Ethernet protocol.
14. The system of claim 13 wherein the monitoring means are installed at an Ethernet bridge installed at the subscriber network.
15. The system of claim 11 wherein the location indicator is a Uniform Resource Locator.
16. The system of claim 14 wherein the location indicator is extracted from an Ethernet Frame originating from a client computer of a network user.
17. The system of claim 11 wherein the database is stored in encrypted form and is searched by the monitoring means for an encrypted location indicator.
18. The system of claim 11 wherein the monitoring means determine whether the location indicator is in the exception list before determining whether it is in the database and fulfils the request in the event that the location indicator is in the exception list.

19. The system of claim 11 wherein the system fulfils requests in the event that the location indicator associated with the request is in the database, but is a permitted category of restricted content.

20. The system of claim 11 wherein the forwarding means and the dispatching means deliver location indicators on an hourly basis.

21. A computer software product for restricting access to network accessible digital information by the network users of a subscriber network, said product comprising:

(a) computer readable program code means for monitoring all requests by the network users for digital information;

(b) computer readable program code means for determining whether a location indicator associated with each request is included in a database of restricted location indicators stored at the subscriber network;

(c) computer readable program code means for analyzing the content of the information stored at each location indicator not in the database and for denying or fulfilling the request based on the analysis;

(d) computer readable program code means for periodically forwarding the location indicators not in the database to a remote network node; and

(e) computer readable program code means for periodically receiving location indicators from the remote network node and including said location indicators in the database.

22. The computer software product of claim 21 wherein the digital information is content accessible via the Internet.

23. The computer software product of claim 22 wherein the subscriber network is a local area network wherein client computers communicate via the Ethernet protocol.

24. The computer software package product of claim 22 wherein the location indicator is a Uniform Resource Locator.

25. The computer software product of claim 23 wherein the location indicator is extracted from an Ethernet frame originating from a client computer of a network user.

26. The computer software product of claim 21 further comprising computer readable code means for encrypting the location indicator before including in the database or determining whether the encrypted location indicator is in the database.

27. The computer software product of claim 21 further comprising computer readable code means for determining whether the location indicator is in an exception list before determining whether it is in the database and for fulfilling the request in the event that the location indicator is in the exception list.

28. The computer software product of claim 21 further comprising computer readable program code means for fulfilling a request in the event that the location indicator is in the database but is a permitted category of restricted content.

29. The computer software product of claim 21 wherein the location indicators are forward to, and received from, the remote node on at least an hourly basis.